To: Szykman, James J. (LARC-E303)[EPA/LaRC][james.j.szykman@nasa.gov]
Cc: Long, Russell[Long.Russell@epa.gov]; Gullett, Brian[Gullett.Brian@epa.gov]
From: Lavoie, Tegan
Sent: Thur 9/15/2016 5:35:38 PM
Subject: RE: Radiosonde

Hi Jim,

It was good chatting with you as well. I think the ceilometer will work great for our application. To summarize for Russell, we are performing measurements of emissions from open burns (OBs) using a UAV-based platform at two sites in the upcoming month (Radford, VA and McAlester, OK). We need to estimate the depth of the boundary layer during the time of our measurements, and Jim suggested we use a ceilometer.

The OBs at the Radford, VA site (starting ~next week) will be performed on a ~600 x 75 m plot alongside a river, with trees around the other edges. This would likely have some influence on local flows. Do you think this could be an issue with the CL-51 measurements? Also, we realize it might not be feasible to use the CL-51 for this study since it is just a few days away now.

The measurements in McAlester, OK will span October 16th – 27th, so potentially the timing here is more ideal. I haven't seen the site to report on the surrounding topography. Maybe Brian can describe the location?

Russell, let me know if you think this seems feasible? Also, I'm happy to discuss this in more detail with you if interested.

Thanks everyone,
Tegan

Tegan N. Lavoie, Ph.D.

ORISE Fellowship Program Participant

U. S. Environmental Protection Agency

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From: Szykman, James J. (LARC-E303)[EPA/LaRC] [mailto:james.j.szykman@nasa.gov]
Sent: Thursday, September 15, 2016 12:30 PM
To: Lavoie, Tegan <lavoie.tegan@epa.gov>
Cc: Long, Russell <Long.Russell@epa.gov>
Subject: RE: Radiosonde

Hi Tegan,

Good to chat with you. As I mentioned, we are using the sounding station in October, but I think the ceilometer that I have with Russell Long may be a better instrument to meet your needs for a PBLH/MLH. Attached is an August EM article and AMT manuscript we just submitted on the evaluation of the Vaisala CL-51 to obtain a MLH. It should be able to provide you with a continuous MLH height assuming the OB/OD will not be occur in any small valley. You can get some complex flows in mountains regions, but even in Golden, CO the instrument performed well.

Russell- Brain and Tegan have some field experiments in the coming weeks. Unless you have something happening where you need the CL-51, I told Tegan that they can use it for their upcoming field efforts. I asked Tegan to stop by your office to chat.

Jim

From: Lavoie, Tegan [mailto:lavoie.tegan@epa.gov]
Sent: Thursday, September 15, 2016 11:04 AM
To: Szykman, James J. (LARC-E303)[EPA/LaRC] <james.j.szykman@nasa.gov>
Subject: Radiosonde

Hi Jim,

I hope you're doing well. I'm working with Brian Gullett in NRMRL and we're planning to conduct some vertical profiles of the lower atmosphere via radiosondes. We are looking into purchasing a system, but first wanted to see if anyone might have a radiosonde receiver that they'd be willing to lend out. Matt Landis mentioned that you have one, so I thought I'd reach out to see if you'd be interested/willing to lend out your receiver? If you need additional information, I'd be happy to discuss this with you further.

Thanks in advance.

Best,

Tegan N. Lavoie, Ph.D.

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